

CLAIMS

Sub 1

1. An electrical connector of the type which is connectable to a substrate, comprising:

a housing;

a plurality of electrical contacts carried by the housing, each contact having contact interface interconnectable with a reciprocal contact interface carried by a substrate;

a contact guide having a plurality of apertures positioned to align and mate with the contact interfaces of the contacts; and

the housing including locking mechanism configured to mate with both the contact guide and the substrate for securing the contact guide and the substrate to the housing.

2. An electrical connector as set forth in claim 1, wherein the locking mechanism comprises at least one post extending from the housing and being configured to mate with reciprocal apertures formed in both the contact guide and the substrate for securing the contact guide and the substrate to the housing.

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3. An electrical connector as set forth in claim 2, wherein the at least one post is sized to form an interference fit with the reciprocal aperture in the contact guide.

4. An electrical connector as set forth in claim 3, wherein the at least one post includes an enlarged diameter portion sized to form an interference fit with the reciprocal aperture formed in the contact guide.

5. An electrical connector as set forth in claim 2, wherein the post is adapted to snap into the reciprocal aperture in the substrate.

6. An electrical connector as set forth in claim 2, wherein the post comprises a bifurcated post having first and second opposed legs which are compressible towards one another for insertion into the reciprocal aperture in the substrate.

Sub C1 7. An electrical connector as set forth in claim 6, wherein at least one of the opposed legs includes a locking feature configured to lockingly engage with the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate.

8. An electrical connector as set forth in claim 1, wherein the contact interfaces comprise male pin connectors.

Subas 9. An electrical connector, comprising:
a housing having a substrate end matable with a substrate and a connector end matable with a second electrical connector;

a plurality of electrical contacts carried by the housing, each contact having a first contact interface positioned in the substrate end of the housing for interconnection with a reciprocal contact interface carried by the substrate and a second contact interface positioned in the connector end of the housing for interconnection with a reciprocal contact interface carried by the second electrical connector;

a contact guide configured to mate with the substrate end of the housing, the contact guide including a plurality of apertures positioned to matingly align with the first contact interfaces; and

a single connection means for securing the housing to both the contact guide and to the substrate.

10. An electrical connector as set forth in claim 9, wherein the first contact interface is oriented perpendicular to the second contact interface.

11. An electrical connector as set forth in claim 9, wherein the single connection means comprises a post extending from the substrate side of the housing, the post being configured to mate with a reciprocal aperture formed on the contact guide and a reciprocal aperture formed on the substrate.

Suba3 12. An electrical connector as set forth in claim 11, wherein the post has an enlarged portion sized to form an interference fit with the reciprocal aperture in the contact guide.

13. An electrical connector as set forth in claim 11, wherein the post is adapted to snap into the reciprocal aperture in the substrate.

14. An electrical connector as set forth in claim 11, wherein the post has first and second opposed legs that are compressible towards one another to allow the post to be inserted into the reciprocal aperture in the substrate.

Sub C2 15. An electrical connector as set forth in claim 14, wherein at least one of the opposed legs includes a locking feature configured to lockingly engage with the substrate when the first and second legs are inserted into the reciprocal aperture in the substrate.

16. An electrical connector as set forth in claim 9, wherein the first contact interfaces comprise male pin connectors.

Suba4 17. An electrical connector, comprising:
a housing having a substrate end matable with a substrate and a connector end matable with a second electrical connector;
a plurality of electrical contacts carried by the housing, each contact having a first contact interface positioned in the substrate end of the housing for interconnection with a reciprocal contact interface carried by the substrate and a second contact interface positioned in the connector end of the housing for interconnection with a reciprocal contact interface carried by the second electrical connector;

a contact guide configured to mate with the substrate end of the housing, the contact guide including a plurality of apertures positioned to matingly align with the first contact interfaces; and

first and second posts extending from the housing, each of the posts being configured to mate with a reciprocal aperture formed on the contact guide and a reciprocal aperture formed on the substrate for securing the housing to the contact guide and the substrate, respectively.

18. An electrical connector as set forth in claim 17, wherein the posts have an enlarged portion sized to form an interference fit with the reciprocal apertures in the contact guide.

19. An electrical connector as set forth in claim 17, wherein the posts are adapted to snap into the reciprocal apertures in the substrate.

20. An electrical connector as set forth in claim 17, wherein each post has first and second opposed legs that are compressible towards one another to allow the post to be inserted into a reciprocal aperture in the substrate.

21. An electrical connector as set forth in claim 20, wherein at least one of the opposed legs of each pair includes a locking feature configured to lockingly engage with the substrate when the first and second legs are inserted into a reciprocal aperture in the substrate.

22. An electrical connector as set forth in claim 17, wherein the first and second contact interfaces comprise male pin connectors.

23. An electrical connector as set forth in claim 17, wherein the first contact interface is oriented perpendicular to the second contact interface.